

### **REMARKS**

In an office action dated 28 January 2004, the Examiner rejects claims 8-19 (all pending claims). In response to the office action, Applicants amend claims 8-13, cancels claims 14-19 and add claims 20-25. Applicants also respectfully traverse the rejection. Claims 8-13 and 20-25 are now pending in the application. In light of the amendment and the following arguments, Applicants respectfully request that this application be allowed.

The amendments here presented are made for the purposes of better defining the invention, rather than to overcome the rejections for patentability. Support for the amendments herein presented can be found in the specification and claims as filed. No new matter has been introduced as a result of the amendments. Reconsideration and allowance is respectfully requested in view of the amendments and the following remarks.

#### **The 35 U.S.C. § 112 Rejection**

The Examiner rejects claim 8 under 35 U.S.C. §112(1) as being indefinite because of the term hydrophilic powder because no properties of a hydrophilic powder are disclosed. However, one skilled in the art will recognize that a hydrophilic powder is a powder that combines with water when exposed with water as the definition of hydrophilic is “capable of uniting or taking up water.” See *Websters New World Dictionary third Edition*, MacMillan, 1996, page 662. Examiner is reminded a claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought. *In re Swunehart*, 160 USPQ 226 (CCPA 1971). It is noted that in this particular art that a hydrophilic powder is a water-dispersible powder. Applicants provide a first attachment from Powder Physics Figure Captions Issued 21 December 1985 by NGT Corporation.

With regards to the 35 U.S.C. §112(2) rejection of claim 8, one of ordinary skill in the art would know that a hydrophilic powder is a water-dispersible powder. In this technical field, “hydrophilic” may be referred to as “water-dispersible”. Specifically, as shown in the attachment 3, a conductive oxide powder having a large number of OH

groups at the surface thereof, may be said to be hydrophilic. In contrast, if a small number of OH groups is at the surface thereof, may be said to be non-hydrophilic. However, there is no standard which determines whether the conductive oxide powder is hydrophilic or non-hydrophilic. In this technical field, whether the conductive oxide powder is hydrophilic or non-hydrophilic is determined by actually dispersing in water. It is a fact when hydrophilic conductive oxide powder is easily dispersed in a polar solvent. However, the concept of whether this is hydrophilic or non-hydrophilic is different from the concept of whether this is polar or non-polar. Moreover, as shown in the second attachment from Surface Chemistry issued 28 November 1975 printed by The Nikkan Kogyo Shimbun, Ltd. "Hydrophilic" and "non-hydrophilic" are generally used in powder in this art. Thus, in this case, hydrophilic powder adequately describes the powder to allow one making the invention to understand the limitation, thus the claim is not indefinite. Therefore, Applicants respectfully request that the Examiner remove this rejection.

Claim 12 recites a transparent conductive film. Thus there is a measure of thickness of the film. In this art, the thickness of a transparent conductive film is generally in a range of 0.1  $\mu\text{m}$  to 20  $\mu\text{m}$ . Applicants provide a third attachment that is a partial translation of Japanese Unexamined Patent Application, First Publication No. H11-242916 showing that 0.1  $\mu\text{m}$  to 20  $\mu\text{m}$  is the generally held thickness of the transparent conductive film. The opinion of the Examiner is that "the thinner the film, the lower the haze value" is generally correct. However, in this art, it is recognized that since the thickness of a transparent conductive film is very small such in a range of 0.1  $\mu\text{m}$  to 20  $\mu\text{m}$  haze value and light permeability do not substantially vary depending on film thickness.

Applicants have amended claim 13 to include the recitation that primary particles aggregate to form secondary particles as is taught in the specification at page 5, lines 1-3. This provides a meaning of the secondary particle and primary particle. This removes the inconsistency between the ranges of the primary and secondary particles. Thus, Applicants request that the 35 U.S.C. §112(1) rejection of claim 13 be removed.

All other rejections are moot as being directed to canceled claims.

Claims 20-25 have been written in the same manner as claims 8-13. Therefore, none of the 35 U.S.C. §112(1) rejections apply to claims 20-25.

#### The 35 U.S.C. § 102 Rejection

Claim 8 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yukinobu et al (U.S. Patent No. 6,261,479). Claim 8 is also rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sato et al (U.S. Patent No. 5,204,177). Claim 8 is also rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Murouchi et al (U.S. Patent No. 5,504,133). Claims 1, 2, 4 and 5 were rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nishihara et al (U.S. Patent No. 5,518,810). Claims 1, 2, 4 and 5 were rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tamai et al (U.S. Patent No. 2002/0051879). The rejections are traversed.

In order to anticipate a claim under 35 U.S.C. § 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

Claim 8 recites that the paint includes a hydrophilic powder and a difficultly dispersible high-boiling point solvent selected from a group consisting of 1-ethoxy-2-propanol, 1 methoxy-2-propanol, 2-methoxyethyl acetate, 2 ethoxyethyl acetate, 2-

butoxyethyl acetate, tetrahydrofurfuryl alcohol, propylene carbonate, N,N-dimethyl formamide, N-methylformamide, N-methyl pyrrolidone, 2-ethoxy ethanol, and 2-butoxy ethanol. None of the references cited in the rejection teach a hydrophilic oxide powder and the specific difficultly dispersible high-boiling point solvent. Thus the rejections cannot be maintained.

Since the paint of claim 8 has these unique features, the paint of claim 8 has the following effects, which are not obtained by the materials taught in the cited references. When the paint of claim 8 is applied on a substrate and dried, first the easily dispersible low-boiling point solvent is evaporated. When the easily dispersible low-boiling point solvent is evaporated, the conductive oxide powder contained in the solvent is gradually aggregated in a mesh form. Since the conductive oxide powder does not move in the difficultly dispersible high-boiling point solvent, which is not evaporated yet. Therefore, the conductive oxide powder is aggregated in a mesh form. When the difficulty dispersible high-boiling point solvent is evaporated while the mesh form is maintained, the conductive oxide powder is fixed by a binder component contained in the paint, and then the transparent conductive film having mesh-shaped openings, as shown in FIG. 1 is prepared. As a result, even when the paint contains a small amount of the conductive oxide powder, the transparent conductive film has excellent conductive passes and excellent transparency by the mesh-shaped openings. Claim 8 mentions a special combination among the hydrophilic conductive powder, the easily dispersible low-boiling point solvent, and the difficultly dispersible high-boiling point solvent, which is preferably used for obtaining these effects. For these reasons, Applicant respectfully requests that claim 8 be allowed.

Claims 9-13 depend from claim 8. Thus, claims 9-13 are allowable for at least the same reasons as claim 8. Thus Applicants respectfully request that the rejections of claims 9-13 be removed and claims 9-13 be allowed.

New claim 20 is allowable over all the rejections of claim 8 for the following reasons:

Yukinobu et al (US 6,261,479) discloses a combination of ethanol and diacetone alcohol (column 14, line 5). Ethanol and diacetone alcohol are neither the easily dispersible low-boiling point solvent nor the difficultly dispersible high-boiling point solvent. That is, Yukinobu does not disclose the combination of the easily dispersible low-boiling point solvent and the difficultly dispersible high-boiling point solvent in claim 20.

Sato (US 5,204,177) discloses a combination of methyl ethyl ketone (this is one of the easily dispersible low-boiling point solvents in claim 20) and toluene (this is one of the difficultly dispersible high-boiling point solvents in claim 20). However, the weight ratio between them is 1:1, which is outside the range of 95:5 to 60:40 in claim 20.

Murouchi et al (US 5,504,133) discloses that a combination between a polar solvent and a non-polar solvent is preferable. Specifically, the mixture of butanol/ xylene (weight ratio: 4/6) is used in the Example 1. However, the paint of claim 20 does not contain butanol. That is, Murouchi does not disclose the combination of the solvents in claim 20.

Nishihara et al (US 5,518,810) discloses use of tetrahydrofuran and dimethylformamide in the Example 5. However, the paint of claim 20 does not contain dimethylformamide. That is, Murouchi does not disclose the combination of the solvents in claim 20.

Tamai et al (US 2002/0051879) discloses preferable solvents for a functional film, but does not disclose specific combination of the solvents in \_0050\_. Tamai discloses the mixture of methyl ethyl ketone/ toluene/ cyclohexanone (weight ratio: 1/1/1) as a preferable combination of the solvents in \_0077\_. Methyl ethyl ketone is one of the easily dispersible low-boiling point solvents in claim 20, and toluene and cyclohexanone belong to the difficultly dispersible high-boiling point solvents in claim 20. That is, Tamai discloses the mixture of the easily dispersible low-boiling point solvent and the difficultly dispersible high-boiling point solvent having a mixing weight ratio of 1:2. This weight ratio is outside the range of 95:5 to 60:40 in claim 20.

Since the paint of claim 20 has unique features, the paint has similar effects of the paint in claim 8, which are not obtained by the citations. Claim 20 mentions a special

combination among the non-hydrophilic conductive powder, the easily dispersible low-boiling point solvent, and the difficultly dispersible high-boiling point solvent, which is preferably used for obtaining these effects.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

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Sierra Patent Group, Ltd.  
P.O. Box 6149  
Stateline, NV 89449  
(775) 586-9500 Telephone  
(775) 586-9550 Facsimile

Respectfully submitted,  
SIERRA PATENT GROUP, LTD.



William P. Wilbar  
Reg. No.: 43,265